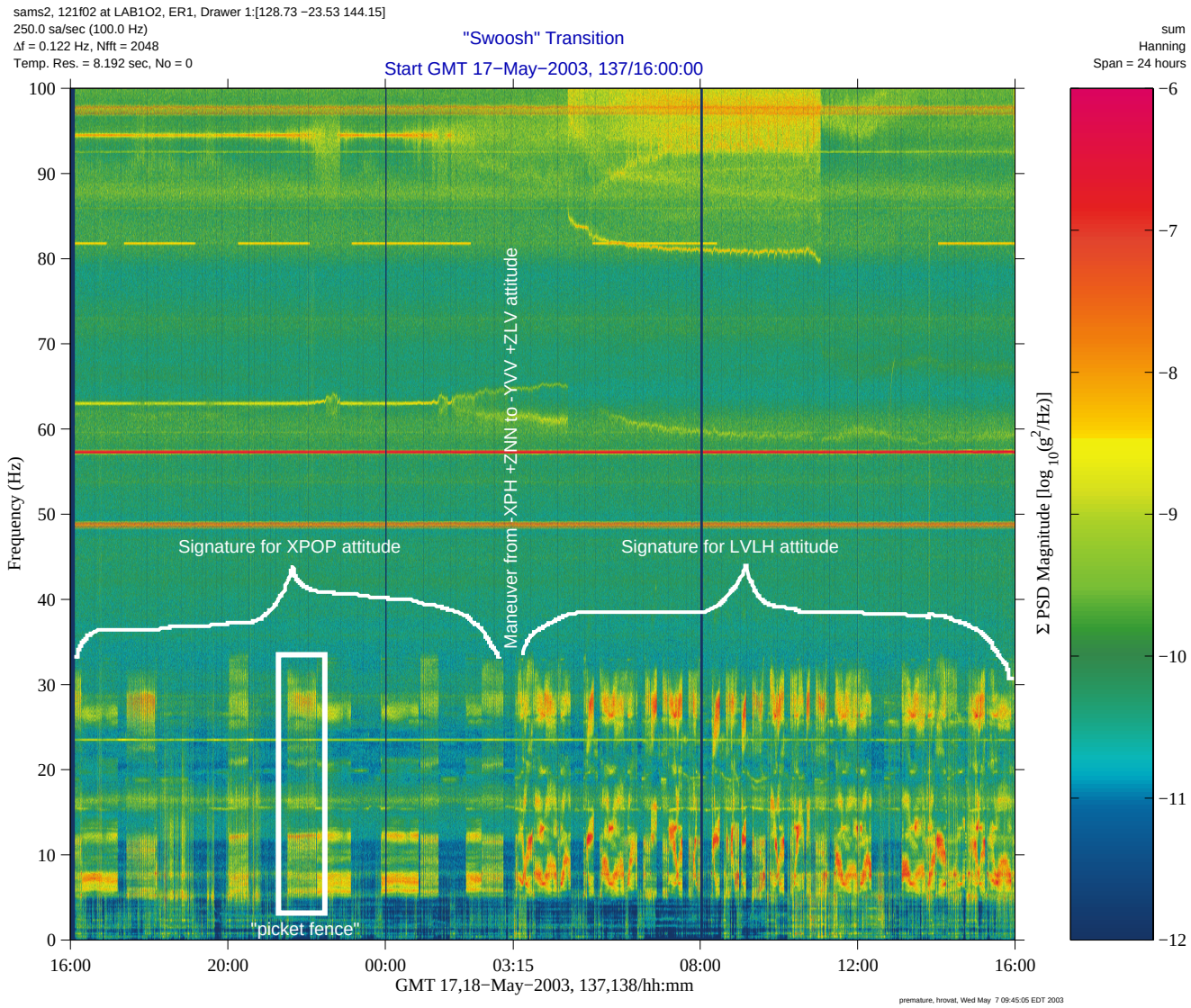
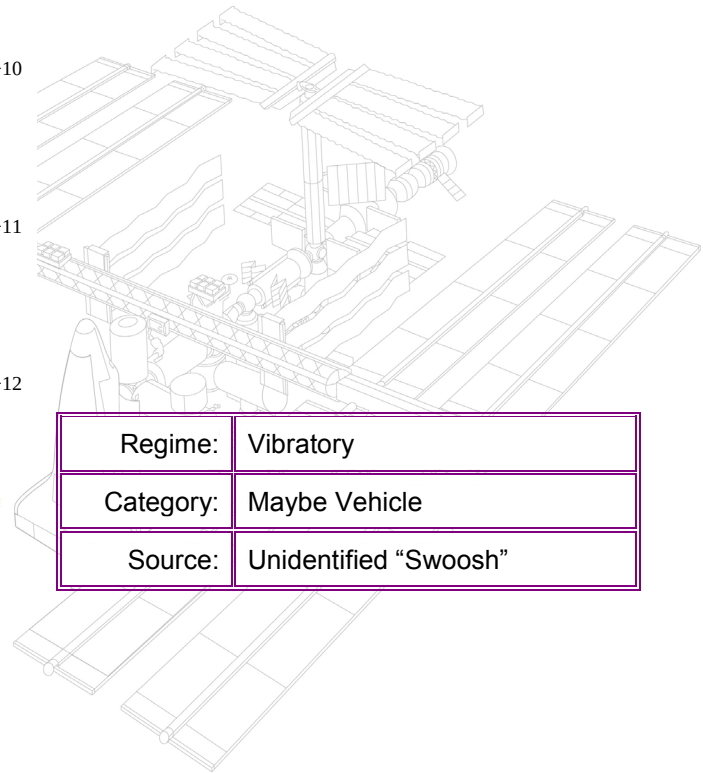
Unidentified “Swoosh”
Qualify



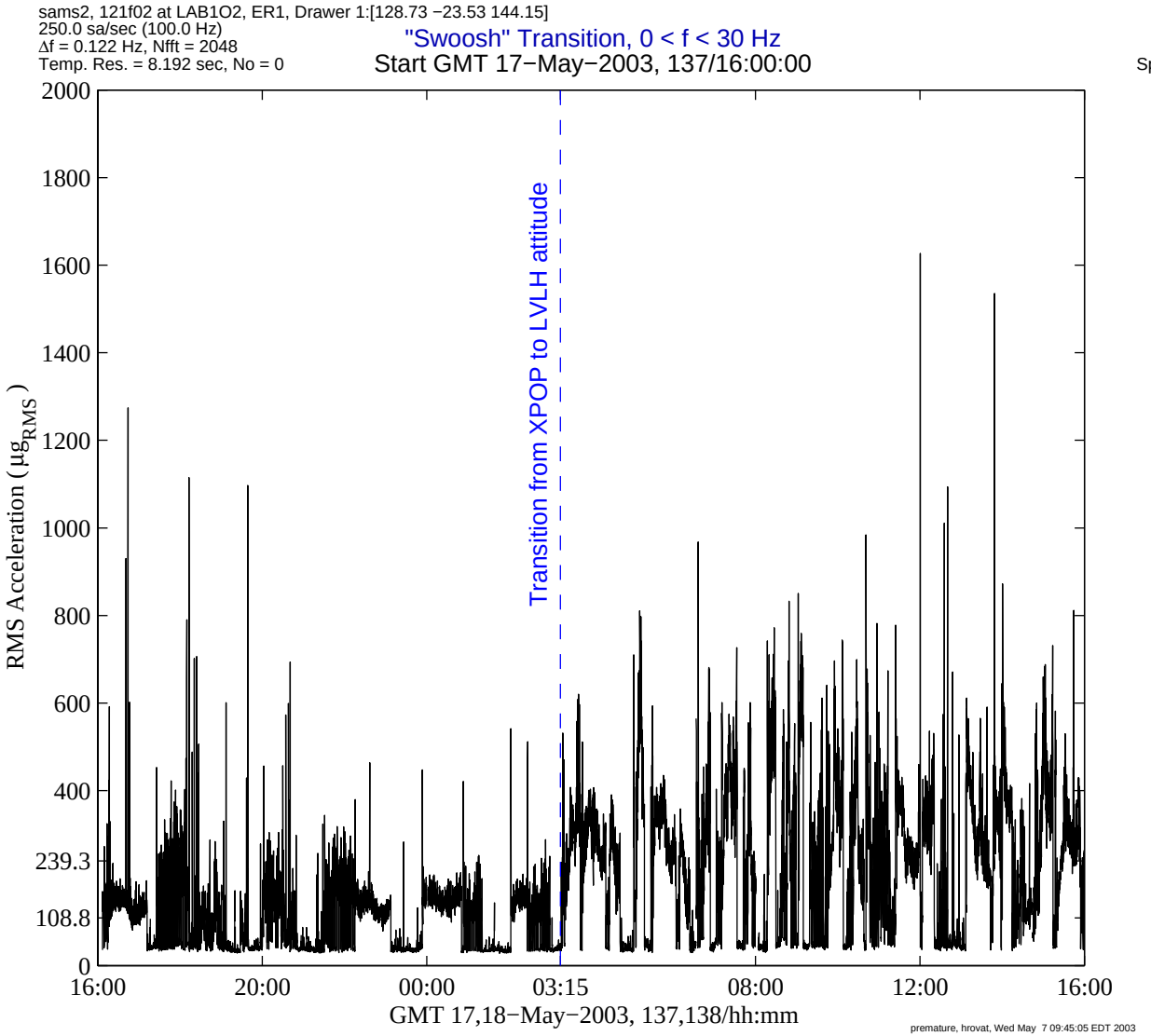
Data Description	
Sensor	SAMS 121f02 250.0 sa/sec (100.00 Hz)
Location	LAB1O2, ER1, Drawer 1
Inc/Flight	Increment: 7 Flight: 6S
Plot Type	spectrogram

Notes:
This unidentified disturbance plays a major role in shaping the vibratory environment below about 30 Hz. A distinct shift in its vibratory signature occurs with transitions between XPOP and LVLH attitudes of the space station. The figure here shows a transition from XPOP to LVLH attitude. The “swoosh” nickname comes from the frequency variations observed primarily around 10 Hz during LVLH attitudes. Another somewhat subtle variation is shown in the rectangle and dubbed the “picket fence”.



Regime:	Vibratory
Category:	Maybe Vehicle
Source:	Unidentified “Swoosh”

Unidentified “Swoosh”
Quantify



Data Description	
Sensor	SAMS 121f02 250.0 sa/sec (100.00 Hz)
Location	LAB1O2, ER1, Drawer 1
Inc/Flight	Increment: 7 Flight: 6S
Plot Type	interval RMS

Notes:
As indicated by the vertical line at about GMT 18-May-2003,138/03:15, the space station maneuvered from XPOP to LVLH attitude. This interval RMS plot for the frequency band below 30 Hz shows that the LVLH manifestation of the unidentified “swoosh” (before 03:15 in the figure) has substantially greater impact on the vibratory environment than that for XPOP (after 03:15 in the figure). The XPOP value below is for the 11 hours 15 minutes before the transition, while the LVLH value is for the 12 hours 45 minutes after the transition.

Attitude	Median μg_{RMS}
-XPH +ZNN (XPOP)	108.8
-YVV +ZLV (LVLH)	239.3

Regime:	Vibratory
Category:	Maybe Vehicle
Source:	Unidentified “Swoosh”